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Supporting the Language Development and Service Needs of Young Children from Chinese Immigrant Families: Utilizing Best Practices from International Education

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Abstract: *As many more families emigrate to the United States (US) and other countries from China, it becomes vital that families, service providers, and professionals understand the basic demographic characteristics of these families. Early detection followed by culturally competent intervention services is more likely to provide the best chance of long-term beneficial outcomes for children with varying educational needs. This research investigation aims to provide more detailed information and cultural support for evidenced based interventions to school providers so that they will know how to better serve students from Chinese immigrant families. The research investigators used three approaches in this exploratory study: a survey instrument, a follow-up interview, and a case study. The results of this study demonstrate that these immigrant families, especially those from Chinese cultures, possess unique characteristics and strengths. The usefulness of this information to practitioners is two-fold: a more comprehensive summary of the demographic characteristics of Chinese immigrant families and the self-reported concerns and challenges of these families with unmet educational needs.*

Key Words: culture, education, language, Immigrant children

Introduction

In a diverse society such as the United States, it is extremely important to provide culturally competent services to children and their families from diverse cultural backgrounds, including those with children who are gifted or who have disabilities, in order to better provide evidence-based, culturally competent educational services for all learners. As many more families immigrant to the United States (US) from China, it becomes vital that families, service providers, and professionals understand the basic demographic characteristics of these families. Immigrant families often have characteristics and needs that are their reasons for immigrating. In addition, these families may develop unique characteristics as they maintain their

culture within the mainstream of US society. As our world becomes more global (Brown & Kysilka, 2002), our educational system needs to understand these families, their unique characteristics, and reasons for immigration, especially for those families with school age children with varying educational needs.

Early detection followed by culturally competent intervention services is more likely to provide the best chance of long-term beneficial outcomes for children with varying educational needs. The challenge for early childhood educators is to engage the families from diverse cultural and linguistic backgrounds in a realistic manner that honors the differences in culture and language (Al-Hassan & Gardner, 2002). As demonstrated through research (Al-Hassan & Gardner, 2002; Brown, 2010; Kagan,

1996; Mei, 1996), families play an essential role for early detection, diagnosis, and evidence-based interventions. However, the research problem is that most educational service providers do not understand the basic demographic characteristics of Chinese immigrant families. In addition to not understanding the needs of immigrant families, many providers do not understand the individual cultures among Chinese families. Understanding the cultures from which these families originate is essential to providing basic services, in addition to understanding the very unique characteristics of those families that choose to immigrate and make a life in our global society.

Culture is often seen in the broad sense as “the values, traditions, social and political relationships, and worldview created, shared, and transformed by a group of people” (Nieto, 2000, p. 138). Important cultural differences in any setting may be any combination of age, race/ethnicity, social class, sex, language, religion, sexual orientation, ableness (special needs), regionality, and nationality. Cultural influences and individual preferences will influence the ways the students and their families think, learn, act and react. The more different the cultural backgrounds, the more likely that the individuals involved will face cultural conflicts resulting from those differences, especially when sensitive topics or cultural incidents occur (Brown, 2010). It is easy to assume with will routinely take place in the early childhood setting without families and professional who are able to maintain a global or world view of those differences. Mismatches leading to conflicts are commonplace, especially if teachers are not sensitive to cultural differences and their implications in classrooms.

Quality Early Education Programs

Defining the quality of early education or school based programs for Chinese families

is difficult, especially for families who choose to immigrate to the US. Many of these families come from cultural origins with very different viewpoints about education. Early education programs in the US typically see quality as the number of caregivers and on the arrangements of the educational setting. These are often referred to as input characteristics of the educational program. These input characteristics do not take into account the full educational environment: how the staff interact, how the parents feel, or planning family based services for children whose needs range from disabled to gifted. Some researchers (Kagan, 1996; Mei, 1996; McCrea, 1996) feel this issue of defining quality programs is a critical aspect of providing appropriate and adequate programs, especially for immigrant families. The closer the relationship is between the parents and the early education program, the better the quality of services that will be provided (Mei, 1996). This is particularly important for families whose child(ren) maybe identified as disabled or gifted. Bridging this gap between educators and immigrant families is the responsibility of both the professionals involved and the families themselves (Al-Hassan & Gardner, 2002). Both have to be involved in the process of building the relationship.

Minorities in the US can often be associated with financial, social, and health issues. There is some research evidence that the overall health status of persons who are of a minority status is less stable than that of those who are not of an ethnic or cultural minority (Emerson, Robertson, & Wood, 2004). These conditions can lead to prevailing conditions that negatively impact the well-being and functioning of all family members. It is possible that this negative impact is exacerbated by the socio-economic situation of the family. However, it may also attributed to the differences in cultural and linguistic practices that are unrecognized by the mainstream populations.

Need for Understanding Characteristics of Chinese Immigrant Families

Certainly, having another language as the primary language learned may result in barriers for families to face, the very least of which is less of a meaningful dialogue and partnership (Lo, 2008). The shortage of bi-lingual professionals in the field of education is a challenge, particularly in communication and understanding. Many in the US see our historical immigrants, the pioneers, as possessing unique characteristics that support their immigration paths. Many of those pioneer families already possessed the facility of the English language. It is critical for professionals to understand the cultural, linguistic, and ethnic background of each family, but also to see those families as unique members of a global society. Perhaps families who immigrate to the US possess characteristics that go beyond their origins. Many of these families may have chosen to immigrate in order to better the lives of their children within the public school system (Al-Hassan & Gardner, 2002).

Immigrants to the US have long been a part of the fabric of that country. However, history shows that these families found it necessary to quickly assimilate as Americans in terms of language, culture, and practices. With more and more Chinese families immigrating to the US in recent years, it has begun to be apparent that these immigrant families many times will maintain their culture and beliefs within the family's home rather than to assimilate all aspects of the host country's culture. For early childhood educators, it is especially critical to begin working directly with these families as soon as possible, especially in case of young children with disabilities or with gifted/talented abilities. These professionals must understand the uniqueness of families who immigrate and take the time to think through cultural issues and their implications (Lee, 1989).

However, little research has been done to survey immigrant families, especially those from China, for unique characteristics of the family's beliefs and practices. It is for this reason that a study was undertaken to survey Chinese immigrant families in a diverse area of the northeastern part of the US. It is hoped that this study can convey a picture of the demographic characteristics of Chinese immigrant families living in the US, especially those families with a young child with a disability or those children who are gifted and talented. These insights may result in improved educational resources for these families.

Methods

Research Problem

This research investigation aims to provide more detailed information and cultural support for evidence-based interventions to school providers so that they will know how to better serve students from Chinese immigrant families. The research investigators used three approaches in this exploratory study: a survey instrument, a follow-up interview, and a case study. The primary research problem was: What are the demographic and unique characteristics of Chinese immigrant families living in the United States? The researchers identified this research problem as central to the issue of providing appropriate, culturally based services for young students and their families in early education programs. What are the challenges and service needs faced by Chinese immigrant families who have children identified with varying educational needs, including those who are gifted and talented or with a disability?

Participants

The participants responding to the survey instrument were Chinese immigrant families with young children aged from birth to 10 located in the northern-east region of the US. They may have a child identified with a disability or identified as

gifted and were contacted through daycares/schools/community organizations/churches. These Chinese families which the survey was distributed were then invited to be interviewed in order to better determine the type of educational supports that meet their individual needs.

Finally, one Chinese family was selected to serve as the basis of a case study in order to better understand the unique characteristics of Chinese immigrant families and the language development in both Chinese Mandarin and English. The family is an immigrant family of three generations and consists of maternal grandparents, parents, and a single four-year-old male child whose first language is Chinese. The boy was born with a heart murmur. He was under the cardiologist's regular check-up until the problem was gone at one and a half years of age. When he was 16 months old, he was found to have febrile seizures. The febrile seizures happened four times in six weeks during his daycare life. Due to the concerns to his health, the parents chose to home school him until he approached to his pre-school year, with the hope that the febrile seizures will be gone once he grows older and has a better immune system. Because of the uniqueness of his home environment, his Chinese language was age appropriate, while his English language was minimal and emerging.

With the combination of different methods, the current paper aims to provide more detailed information and cultural support for evidence-based interventions to school providers so that they will know how to better serve students from Chinese immigrant families.

Instruments

A total number of 160 surveys were distributed in order to measure the demographics of these local Chinese immigrant families. The items on the instrument were in both English and Chinese languages. The demographic characteristics of high relevance to all

educators included: the children's gender, place of birth, date of birth, disability identified, giftedness identified, years in U.S., number of siblings, ordinal position, number of languages used at home, primary language at home, daycare or school; the parents' age, place of birth, years in U.S., education level, income level; and whether or not there are any other family members other than the child, siblings, and parents living at home.

In the follow up to the survey, four open-ended interview questions (adapted from Fallon & Harris, 1992; Fallon & Harris, 1991) were asked about the families' needs for support and areas of nonsupport. The questions include: How satisfied are you with the support you have been given concerning your child's growth and development? How satisfied are you with the support you have been given to work on your child's areas of needs or development? What areas of the support services would you suggest be improved? And what other types of services would you or your family wish to access?

Last, one immigrant Chinese family was selected using a convenience sampling approach for a more in-depth approach of a case study. The primary researcher captured over 644 minutes, or more than 5.6 hours, of early language development in both Chinese and English videotaped sessions across 26 days. The focus of the study was on the development of early language skills in the primary language and in the developing language skills of English. The purpose of the case study was to better understand the development of childhood language in Chinese and English using Chinese poems as basis of language development.

Procedures

The first author contacted daycares/schools/Chinese organizations/Chinese churches in the western area of New York State, got the approval from some of them to distribute the survey, and delivered the self-addressed envelopes with stamps and

surveys in both English and Chinese to be distributed to the Chinese immigrant families. E-mails, telephone calls, letters and some travels were used as initiatives and follow-ups. In total, 40 out of 160 surveys were mailed back (25%), among which 30 reported children under 10 years of age (19%) and were used in this study. Descriptive data were analyzed by calculating both the frequency and percentage of the characteristics of children, parents, and grandparents. A one-way ANOVA was used to see whether there were any significant differences within different variables. Furthermore, bivariate correlations were conducted to see whether there was any correlation between the variables as well.

The follow-up interview took place as a qualitative study to further describe and reflect the families' perspectives on their children's education. Again, e-mails, telephone calls, letters and some travels were used as initiatives and follow-ups to invite participants. Totally, five parents with children under ten years of age participated in the one-on-one interview. Participants' answers were transcribed, entered into computer, coded and analyzed by questions. Member checks were used for the reliability of the interview and it was 100%.

In the case study, two trained observers who speak both Chinese and English independently coded 56% of the 644-minute-long videotape sessions, and analyzed the early language development in both Chinese Mandarin and English languages by using five minute intervals. The inter-rater reliability was 98%. In the language of Chinese, monosyllabic words, polysyllabic words, sentences, and identified concepts demonstrating cognitive development were studied; while in the language of English, utterance, words, sentences, and identified concepts demonstrating cognitive development were studied. T-test was then used to determine if there was any significant difference between the language

development of Chinese and English, per word, per sentence, and per minute.

Results

The central research questions posed for this study were: What are the demographic and unique characteristics of Chinese immigrant families living in the United States?, and What are the challenges and service needs faced by Chinese immigrant families who have children identified with varying educational needs, including those who are gifted and talented or may have a disability? This investigation into the unique characteristics of Chinese immigrant families used a three pronged approach to the research design: a survey of Chinese immigrant families, a follow up interview, and an in-depth case study of three generations of one Chinese immigrant family.

Descriptive Statistics

The majority of the children whose parents participated in this survey were born in U.S. (n=26, 87%); were older than 3 years of age (n=28, 93%) with 6.9 as the mean age; and had one or two siblings (n=24, 80%) with 1.07 as the mean number of siblings. The majority of the children spoke more than one language at home (n=28, 93%). However, less than half of the children in this study used Chinese as the primary language at home (n=13, 43%). More than half of the children studied in suburban schools (n=19, 63%). Thirty seven percent of the children in this study were recognized as gifted, talented, or having leadership skills (n=11), while none of them were reported to be identified with a disability.

Insert Table 1 about here

None of the parents participating in this survey were separated or divorced (n=0, 0%); and over half of them were between 35 and 45 years of age (n=23, 70%). Most of the parents were not born in U.S. (n=26, 84%), and more than half of them spent

less than 15 years in U.S. (n=18, 56%) with 13.8 as the mean years they were in US. The majority of the parents in this study graduated from four-year colleges or graduate schools (n=32, 97%), and they got their highest degrees in U.S. (n=23, 77%). The majority of the families' annual gross income was above \$55,000 (n=22, 73%) with two to four people in the family (n=25, 83%).

Over half of the families in this study were composed of parents and child(ren) without grandparents living together in the household (n=20, 67%). There were ten families where the grandparent(s) lived together in the household (n=10, 33%). None of the grandparents were born in U.S. (n=0, 0%). The majority of the grandparents were visiting U.S. and living with the families for short period of time (n=5, 50% stayed less than one year, while 40% of the grandparents (n=4) stayed longer than one year, but shorter than three years.

Insert Table 2 about here

All parents who participated in the follow-up interview indicated their satisfaction with the support they have been given concerning their children's growth, development and education (n=5, 100%). One parent described his/her satisfaction and appreciation on the service the school provides in details:

He entered his preschool with limited schooling experience and very limited English due to health issues. His English was certainly one of our biggest concerns when he started preschool (another one was his health: is he going to get sick very often?). ... We had the opportunity to fill in a parent questionnaire regarding his strengths and our concerns at the beginning of the school in addition to the dialogue with his teacher on the open house day one day before the school started. His teacher provided information for ESL students available

from the school. Soon we got one letter from the ESL teacher in school, asking if we are willing to let him join a play group, in which ESL students are going to spend 15 minutes every day after school to enhance their English. We are glad that the school took initials to know about the students and what the parents need for their children. The classroom teacher does a great job, bridging the gap between communications. She uses a lot of body language, gestures, scaffolding, song singing, pictures, etc. to guide him with a lot of patience and love. He loves to go to school, one of his favorite persons is his teacher, and he is making progress on his English every day. One thing I'm very pleased to see is that he is making friends with his peers.

All parents indicated their satisfaction with the support they have been given to work on their children's growth, development and education (n=5, 100%). In addition to the academic growth, the parents also appreciated extra-curriculum programs such as the Chess Club and the development of their children's social interactions with peers.

As for the possible areas of the support services for improvement, one parent indicated the medical service at school, such as a doctor in addition to a school nurse (n=1, 20%); and another parent suggest the introduction of the Chinese /diverse culture by the classroom teacher and the school as a whole (n=1, 20%):

I would like to see the school emphasizes on diversity as a whole. Now what we see is what the classroom teacher does, what the ESL teacher does, and the school provides a questionnaire before the school year. But I haven't become aware of any other activities the school does for the ESL students. In this school, the administrators, teachers (preK to K), and even staff members are all Caucasians as far as I'm aware of. But

for the student population, since it is located in a college town, there are students coming from a various cultural and language backgrounds. So I think it is even more important to promote the concept of diversity.

As for the other types of services the families wish to access, parents suggested more international education, "not just some holidays to celebrate, maybe a deeper understanding different cultures, a little bit foreign language started earlier;" more Chinese Martial Arts, such as "Wushu, Qigong, Tai Chi, which is an excellent way of promoting health and discipline for the children;" and more support/communication between the school and the parents regarding promoting the use of Chinese at home.

It's sad to see my Chinese friends' children speak in English when they talk to each other. Sometimes it's very hard for the parents to stick to the Chinese language while everybody else is talking in English and nobody else appreciate the fact that you are able to speak in Chinese. The ABC (American born Chinese) children are called "banana" because of their yellowish skin and Americanized way of thinking and doing things. How to help the children and their families to carry on their own language and culture? Without the understanding and support from the community, it is very hard to do so. I questioned my own decision on talking to my son in Chinese only. I was questioned by some dear friends about this decision. I wondered if I was a good parent without prepare my son for his school years in regards of English language. With the fear that he hates the school when he just starts his preschool, I questioned myself and wanted to give up. I would appear to be a better mom if he was able to communicate with the others in English instead of just saying the basic greetings when he started his school. It is, by no means, an easy decision to make.

However, when I hear him talking with his grandparents happily and fluently in Chinese over the phone, when I see his big smiles during the conversation with those people my husband and I love so deeply, I think everything is worthy. On the other hand, I feel we are very lucky to have a wonderful classroom teacher and a good ESL teacher who work with him very patiently with different approaches.

In the in-depth, exploratory case study, the researchers calculated the total number of Chinese monosyllabic words/English utterance, Chinese polysyllabic words/English words, Chinese/English sentences, and the Chinese/English concepts. In addition, the frequency of these categories in both Chinese and English per word, per sentence, and per minute was also calculated. The overall results of the case study indicated the early development regarding the vocabulary and structure of the Chinese language were more advanced than the English language development. Table 4 presents the descriptive data on language development in both languages.

Inferential Statistics

Bi-variate correlations in addition to a one-way ANOVA were conducted for the survey. More children were identified as gifted or talented in suburban/rural schools compared to those in urban schools ($F = 5.40^*$, $p < .05$; $r = -.40^*$, $p < .05$). The higher the parent's education level, the higher the family annual gross income ($r = .39^*$, $p < .05$) and the bigger the family size ($r = .35^*$, $p < .05$). If the parent attended US school, the family's annual gross income was higher ($F = 8.88^{**}$, $p < .01$; $r = .47^{**}$, $p < .01$) and the family size was bigger ($F = 10.58^{**}$, $p < .01$; $r = .56^{**}$, $p < .01$). The higher family's annual gross income level, the bigger the family size ($F = 7.80^{**}$, $p < .01$; $r = .70^{**}$, $p < .01$). More parents in this study attended US schools ($F = 6.46^{**}$, $p < .01$; $r = .47^{**}$, $p < .01$) at the elementary through graduate levels. The bigger the family size,

the longer the grandparent stayed in US ($r=.37^{**}$, $p<.05$).

Insert Table 3 about here

In the case study, the researchers used two-sample t-test and significant differences were found between the language development of Chinese and English across all categories over time. Table 4 presents the inferential data on language development in both languages.

Insert Table 4 about here

Discussion

What are the demographic and unique characteristics of Chinese immigrant families living in the United States? What are the challenges and service needs faced by Chinese immigrant families who have children identified with varying educational needs, including those who are gifted and talented or may have a disability? These were the central research questions posed for this study using a combined survey, an interview, and a case study approach. Researchers believe that educating students with special needs who are culturally and linguistically diverse present a special challenge to educators and schools. However, the researchers involved in this study suggest that the families in this study who chose to immigrant and live outside of their homeland and culture for extended periods of time may have many unmet needs and critical issues.

The results of this study demonstrate that these immigrant families, especially those from Chinese cultures, possess unique characteristics and strengths. The usefulness of this information to practitioners is two-fold: a more comprehensive summary of the demographic characteristics of Chinese immigrant families and the self-reported concerns and challenges of these families with unmet needs. Educators must

broaden their knowledge of acculturation and assimilation (Lee, 1989), and in particular, to explore early literacy development of children from culturally and linguistically diverse family background of Chinese immigrants. These characteristics and needs should be understood by all professionals and utilized to provide more appropriate services and supports to these families. Further, they must employ collaborative teams with expertise in bicultural practices in order to better serve these families.

The results of this study have significant implications for families of young children, especially those with cultural, linguistic, and ethnic differences, and those of immigrant status. However, some limitations are evident. The participants in this study were all volunteers. However, it is recognized that the research samples were small and unique to a region in the US. In addition, convenience sampling was used to identify the subjects of the case study. However, the instructional methods used in this study may improve the quality of intervention and enhance the family members' skills in promoting early language development in both the first and second language. Further, the results of this study suggest that family members are easily able to integrate their own familiar, culturally relevant topics into these instructional methods. For many immigrant families, maintaining their cultural, ethnic, and linguistic practices while adding a second language is very important.

Unique Characteristics of Chinese Immigrant Families

The results of this study suggest that a variety of unique characteristics are evident in families whose members choose to immigrant. More gifted/talented children were identified in suburban/rural schools compared to those in urban schools based on the results of the survey instrument. There could be several reasons for this finding. One is that US schools may support the identification of students who are gifted or talented based on federal

laws, Individuals with Disabilities Education Act (1997), Individuals with Disabilities Education Improvement Act (2004), and No Child Left Behind (2001). Perhaps there exists a bias in school professionals that Chinese students are more likely to be gifted or talented. However, another reason may be that Chinese families choose to immigrate because their children are likely to be gifted or talented. This may be unlikely as some researchers (Kwok, 1996) have found support for giftedness and talent by the Chinese government, dating back centuries.

Several findings regarding parental education levels are worthy of discussion. First is the finding that parental education level impacts both the family annual gross income and the family size of Chinese immigrant families in the US. One item on the survey asked participants about their education from elementary through graduate school. The researchers in this study found that the higher the education level of the parent(s), the higher income level for the family. In addition, the higher the education level, the bigger the family size. The fact whether the parents in this study attended a US school impacts positively both family annual gross income and family size.

Many Chinese immigrant families are multi-generational. Often grandparents will also immigrate to support family members in their transition to another country. In this study, the researchers found that the bigger the family size, the longer the grandparent(s) stayed in US. Is it because the grandparents come to visit and take care of the grandchildren when they are young?

Summary

Chinese immigrant families in the United States are rapidly rising. Such families present unique characteristics and are currently underserved in early education programs. Experiences during early childhood can have long lasting effects and may change the course of an individual's

life. The Chinese have a strong belief in being kind to young children and demonstrate a strong belief in early education (Mei, 1996). However, schools in the US have a better track record in providing services to families of young children who have varying educational needs, including disabilities and gifted or talented children (IDEA, 2004).

Many Chinese families may have high expectations for schools to promote the academic advancement of their child(ren) (Lo, 2008). The results of this research lend itself to insights that can be adapted to a variety of early education settings and other immigrant families with young children who have diverse needs. Opportunities exist to take best practices from both American and Chinese educational systems and to apply them to a variety of global educational settings and families. Professionals who work with Chinese immigrant families must take the time to carefully consider the unique needs of the child and the family who choose to immigrate.

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Table 1. Frequency of Variables by Child's Characteristics

	Variables	Frequency	Percent (%)
By Child's Gender	Male	14	47
	Female	16	53
By Child's Birth Country	United States	26	87
	Non-US	3	10
	Not Specified	1	3
By Child's Age	1-3	2	6.6
	4	1	3.3
	5	4	13.3
	6	8	26.6
	7	4	13.3
	8	2	6.6
	9	3	10
	10	6	20
By Number of Siblings	0	6	20
	1	16	53.3
	2	8	26.6
By Number of Languages Used at Home	1	2	6.6
	2	28	93.3
By Primary Language Used at Home	English	11	36.6
	Chinese	13	43.3
	Other	1	3.3
	Both	5	16.6
By School Setting	Urban	6	20
	Suburban	19	63.3
	Rural	2	6.6
	Not Available	3	10
By Child's Ability	Gifted/Talented/Leadership	11	37
	Disability	0	0
	Not Specified	19	63

Table 2. Frequency of Variables by Parent's and Families' Characteristics

	Variables	Frequency	Percent (%)
By Parent's Marital Status	Married	29	96.6
	Separated/ Divorced	0	0
	Not Available	1	3.3
By Parent's Age	Under 25	0	0
	25 to 35	5	15
	35 to 45	23	70
	Over 45	4	12
	Not Available	1	3
By Parent's Place of Birth	United States	5	16
	Non-US	26	84
By Parent's Years in the United States	0 to 5	5	15.6
	6 to 10	7	21.8
	11 to 15	6	18.8
	16 to 20	9	28.1
	21 to 30	1	3.1
	31 to 40	3	9.4
	Not Available	1	3.1
By Parent's Education Level	Less than 4-year College Graduate	0	0
	4-year College Graduate	6	18.2
	Graduate Education	26	78.8
	No Response	1	3
By Parent's Location of Schooling	US	23	76.6
	Non-US	4	13.3
	Not Available	3	10
By Family Annual Gross Income	10,000-25,000	2	6.6
	40,000-55,000	2	6.6
	55,000-85,000	3	10
	85,000 and above	22	73.3
	Not Available	1	3.3
By Family Size	2 to 4 Persons	25	83.3
	5 to 7 Persons	4	13.3
	Not Available	1	3.3
By Grandparents' living with family in the United States or not	Grandfather or Grandmother only	4	13
	Both	6	20
	Neither Grandparent	20	67
By Grandparent's Birth Place	United States	0	0
	Non-US	10*	100*
By Grandparent's time in the United States	6 months to 1 year	5*	50*
	1 year to 3 years	4*	40*
	5 or more years	1*	10*

Note: * This data set includes only the ten grandparents that are currently in the United States.

Table 3. One Way ANOVA and Bivariate Correlation by Variables

One-Way ANOVA by the Results of the Study F and p			
Variable	Characteristic	F	Sig.
By Child's Ability	School Setting	5.4*	.028
By Parent's Years in U.S.	Parent's Age	4.56**	.003
	Parent's Education	92.29**	.000
	Grandparent's Years in US	4.2**	.004
By Parent's education	Primary Language used at Home	3.56*	.042
	Parent's Age	6.63*	.015
	Parent Attending US School or not	3.55*	.041
	Parent's Years in US	4.47**	.020
By Parent Attending U.S. School or not	Child's Birth Place	5.63**	.009
	Family Annual Gross Income	8.88**	.001
	Family Size	10.58**	.000
Family Annual Gross Income	Parent Attending US School or not	6.46*	.000
	Family Size	7.80**	.000
By Family Size	Parent Attending US School or not	10.95**	.000
	Family Annual Gross Income	35.60**	.000
Correlation r (p)			
Variable	Category	r	Sig.
Child's Ability	School	-.40▪	.028
Family Annual Gross Income	Parent's Education	.39▪	.026
	Parent Attending US School or not	.47▪▪	.005
	Family Size	.70▪▪	.000
Family Size	Parent's Education	.35▪	.046
	Parent Attending US School or not	.56▪▪	.001
	Grandparent's Years in US	.37▪	.035

Note: * indicates that there is a significant difference from each other within the category ($p < .05$);

** indicates that there is a significant difference from each other within the category ($p < .01$);

▪ indicates that correlation is significant at the 0.05 level ($p < .05$);

▪▪ indicates that correlation is significant at the 0.01 level ($p < .01$).

Table 4. Descriptive/Inferential Data on Language Development Between Chinese and English

Frequency	Monosyllabic or Utterance	Polysyllabic or Words	Sentences	Concepts
Chinese	14,148	10,776	3,412	7,703
English	259	251	99	143
<i>t (p)</i>	12.85** (.00)	11.40** (.00)	11.49** (.00)	8.62** (.00)
Per Word	Mean Length of Utterance (MLU)	--	Sentences/Word	Concepts/Word
Chinese	1.31	--	0.32	0.71
English	1.03	--	0.39	0.57
<i>t (p)</i>	15.29** (.00)	--	3.84** (.00)	6.41** (.00)
Per Sentence	Utterance/Sentence	Words/Sentence	--	Concepts/Sentence
Chinese	4.15	3.16	--	2.26
English	2.62	2.54	--	1.44
<i>t (p)</i>	5.78** (.00)	3.74** (.00)	--	2.61* (.01)
Per Minute	Utterance/Minute	Words/Minute	Sentences/Minute	Concepts/Minute
Chinese	43.95	33.47	10.60	23.93
English	0.80	0.78	0.31	0.44
<i>t (p)</i>	12.90** (.00)	11.44** (.00)	11.55** (.00)	8.65** (.00)

Note: * indicates *t* score between Chinese and English language development are significantly different at the .05 level ($p < .05$);

** indicates *t* score between Chinese and English language development are significantly different at the .01 level ($p < .01$).